

REMARKS

Initially, Applicants are grateful for the Examiner's time and attention during the telephone interview between their representatives and the Examiner on September 17, 2004. Each of the rejections, addressed below, was discussed in advance with the Examiner during the interview. It is believed that the interview was very beneficial in advancing the prosecution of this case.

Pending claims 1, 3, 5, 7, 8, 10 and 12-20 have been rejected in this application. By this Amendment, claims 1, 5, 7, 8, 10, 12, 13, 17 and 20 have been amended to further demonstrate how the present invention distinguishes over the cited art discussed in the September 17, 2004 telephone interview with the Examiner. The amendments to the claims are supported by the original, claims, specification, and drawings. No new matter has been added. Claims 1, 3, 5, 7, 8, 10 and 12-20 will remain pending in this application. The Examiner is respectfully requested to reconsider and withdraw the outstanding rejections in view of the remarks contained herein.

REJECTIONS UNDER 35 U. S. C. § 102

Claims 1, 3, 5, 7-8 and 13-20 were rejected under 35 U. S. C. § 102(e) as allegedly anticipated by Vail (US 6,464,796). Claims 1, 3, 5, 7-8, 10 and 13-19 were rejected under 35 U. S. C. § 102(e) as allegedly anticipated by Hirose (US 6,554,010). Claim 12 was rejected under 35 U. S. C. § 102(b) as allegedly anticipated by Rohm (US 4,323,085). Claim 12 was rejected under 35 U. S. C. § 102(b) as allegedly anticipated by Belan (US 4,958,596).

Applicants respectfully submit that these anticipation rejections are traversed in light of the amendments to independent claims 1, 12, 13 and 20. Claims 1, 13 and 20 will be discussed first.

As amended, claims 1 and 13 recite the following patentably distinguishing features: a plurality of flexible thready members in a bundle, the members each having a hollow channel and being comprised of a water permeable material. Likewise, amended claim 20 recites the following features: a substrate cleaning tool having a plurality of flexible thready members in a bundle, the members each having a hollow channel and having a number of channels extending from the hollow channel, the members being comprised of a water impermeable material. The cited references, Vail, Hirose, Rohm and Belan, fail to teach or suggest these features because they do not teach or suggest flexible thready (thread-like) members in the overall structure of a substrate cleaning apparatus or tool.

During the interview, the Examiner immediately expressed agreement with the undersigned's position that none of Vail, Rohm, and Belan taught or suggested flexible thread-like or "thready" members. Upon further discussion, the Examiner also appeared to indicate agreement that such description of these members also would patentably distinguish the claims from the Hirose patent. The undersigned pointed out that Hirose also is owned by the assignee-owner of the present application, namely Tokyo Electron Limited.

The flexible thready members provide distinct advantages in the substrate cleaning tools and apparatuses claimed. Specifically, in the present invention, the plurality of flexible thready members provide a wide surface area for substrate cleaning. Because of the wide surface area, large quantities of water are delivered to the object to be cleaned. As a result, the cleaning power of the cleaning tool/apparatus is enhanced and particles and dust are prevented from reattaching to the object (wafer) during the cleaning process.

For the record, Applicants respectfully submit that Vail and Hirose fail to disclose or suggest the flexible thready member features, and their resulting benefits. To those of ordinary

skill in the art, Vail discloses a cleaning tool that includes two long and separate permeable cylindrical brush members 26 and 28. Nothing in Vail suggests to those of ordinary skill in the art that the plurality of impermeable brush members 340 are other than short, flattened protuberances that are rigid relative to the flexible thready members required by the present invention. On the other hand, according to Applicants, Hirose discloses a single short, permeable cylindrical member 69, as opposed to a plurality of flexible thready members in a bundle. Hirose is a wholly different approach to cleaning by providing water permeable brush members or grooves 74. The grooves 74 are wave-shaped linear grooves or in a grating pattern. They are completely different from elongated flexible thready members as called for by the present claims.

Therefore, Applicants submit that Vail and Hirose fail to teach or suggest the substrate cleaning tool or apparatus structure with flexible thready members in a bundle as required in the present invention. Hence, Applicants respectfully submit that amended claims 1, 13 and 20 are not anticipated by Vail or Hirose. Withdrawal of the rejections as to independent claims 1, 13 and 20 (as well as to their dependent claims) thus is solicited.

Now claim 12 is discussed. With regard to claim 12, Applicants submit that the following features patentably distinguish over the Rohm and the Belan patents. Amended claim 12 recites the following: a substrate cleaning tool having a plurality of flexible thready members in a bundle, the members each having a hollow channel and having a number of channels extending from the hollow channel, the members being comprised of a water impermeable material. Rohm and Belan altogether fail to disclose or suggest a substrate cleaning tool with these features to those of ordinary skill in the art.

As discussed with the Examiner, Rohm discloses to those of ordinary skill in the art, tines 3 which are not flexible or thready as claimed in the present invention. Similarly, it was discussed that Belan teaches rigid bristles as opposed to flexible thready members in accordance with the present claims. Therefore, Applicants respectfully submit that Rohm and Belan fail to disclose the recited cleaning tool arrangement with flexible thready members required in the present invention. As such, Applicants also respectfully submit that amended claim 12 is not anticipated by either Rohm or Belan.

For at least these reasons, Applicants respectfully submit that the cited patents fail to inherently or explicitly disclose each and every feature of the invention as set forth in amended claims 1, 12, 13 and 20. As such, Applicants submit that claims 1, 12, 13 and 20, and their respective dependent claims, are not anticipated under 35 U.S.C. §102 and rather are in condition for allowance.

CONCLUSION

Applicants respectfully submit that this Amendment and the above remarks obviate the outstanding rejections in this case, thereby placing the application in condition for immediate allowance. Allowance of this application is earnestly solicited.

If any fees under 37 C. F. R. §§ 1.16 or 1.17 are due in connection with this filing, please charge the fees to Deposit Account No. 02-4300, Order No. 033082M102.

Respectfully submitted,

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Signature: _____



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